CLAIMS:

1. A method of cleaning a vaporization surface of a vapor forming device comprising utilizing the vaporization surface as an electrode to form a plasma within the device.

2. The method of claim 1 wherein the vaporization surface is held at ground potential while RF energy is supplied to a second electrode to form the plasma.

3. The method of claim 1 wherein RF energy is supplied to the vaporization surface while a second electrode is held at ground potential to form the plasma.

4. The method of claim 1 wherein the vaporization surface is provided with a negative bias power while RF energy is supplied to a second electrode to form the plasma.

5. The method of claim 1 wherein the plasma comprises one or more of Cl_2, CCl_4 and CF_4.

6. The method of claim 1 wherein the device is comprised by a chemical vapor deposition apparatus.

7. A method of forming a vapor and cleaning a vaporization surface, comprising:

flowing at least one liquid across a heated vaporization surface to form a vapor;

accumulating a deposition on the heated vaporization surface as the surface is utilized for forming a vapor; and

utilizing the vaporization surface as an electrode to form a plasma within the device, the plasma cleaning at least some of the deposition from the vaporization surface.

8. The method of claim 7 wherein the vaporization surface is comprised by a chemical vapor deposition apparatus.

9. The method of claim 7 wherein the vaporization surface is comprised by a chemical vapor deposition apparatus, wherein the at least one liquid comprises $Ba(THD)_2$, $Sr(THD)_2$ and $Ti(THD)_2(O\text{-}iPr)_2$, and further comprising chemical vapor depositing BST on a substrate within the apparatus.

10. The method of claim 7 wherein the plasma comprises one or more of Cl_2, CCl_4, CF_4, CHF_3, O_2, SF_6, NF_3, CCl_3F, $CClF_3$, C_2F_6, H_2, C_3F_8, and O_3.

11. The method of claim 7 wherein the vaporization surface is held at ground potential while RF energy is supplied to a second electrode to form the plasma.

12. The method of claim 7 wherein RF energy is supplied to the vaporization surface while a second electrode is held at ground potential to form the plasma.

13. The method of claim 7 wherein the vaporization surface is provided with a negative bias power while RF energy is supplied to a second electrode to form the plasma.

14. A method of chemical vapor deposition, comprising:

providing a vaporization surface;

heating the vaporization surface;

flowing at least one material past the heated surface to vaporize said material;

forming a deposit on the vaporization surface during the vaporization;

utilizing the vaporization surface as an electrode to form a plasma; and

removing at least a portion of the deposit with the plasma.

15. The method of claim 14 wherein the vaporization surface is held at ground potential while RF energy is supplied to a second electrode to form the plasma.

16. The method of claim 14 wherein RF energy is supplied to the vaporization surface while a second electrode is held at ground potential to form the plasma.

17. The method of claim 14 wherein the vaporization surface is provided with a negative bias power while RF energy is supplied to a second electrode to form the plasma.

18. The method of claim 17 wherein the negative bias power is from about -1000 volts to about -20000 volts.

19. The method of claim 14 wherein the plasma comprises one or more of Cl_2, CCl_4, CF_4, CHF_3, O_2, SF_6, NF_3, CCl_3F, $CClF_3$, C_2F_6, H_2, C_3F_8, and O_3.

20. The method of claim 14 wherein the at least one material comprises $Ba(THD)_2$, $Sr(THD)_2$ and $Ti(THD)_2(O\text{-}iPr)_2$, and further comprising chemical vapor depositing BST on a substrate.

21. A vapor forming device comprising:

a vaporization surface configured to vaporize a non-vapor-state-material;

a first plasma electrode spaced from the vaporization surface; and

plasma generation circuitry configured to utilize the vaporization surface as a second plasma electrode and to form a plasma between the first and second plasma electrodes.

22. The vapor forming device of claim 21 wherein the plasma generation circuitry is configured to hold the vaporization surface at ground potential and supply RF energy to the first plasma electrode to form the plasma.

23. The vapor forming device of claim 21 wherein the plasma generation circuitry is configured to supply RF energy to the vaporization surface and hold the first plasma electrode at ground potential to form the plasma.

24. The vapor forming device of claim 21 wherein the plasma generation circuitry is configured to provide a negative bias power to the vaporization surface and supply RF energy to the first plasma electrode to form the plasma.

25. The vapor forming device of claim 24 wherein the negative bias power is from about -1000 volts to about -20000 volts.

26. A vapor forming device comprising:

a non-vapor-state-material input region;

a vaporization surface;

a flow path between the non-vapor-state-material input region and the vaporization surface;

a vapor-state-material output region;

a vapor flow path from the vaporization surface to the vapor-state-material output region;

a first plasma electrode spaced from the vaporization surface; and

plasma generation circuitry configured to utilize the vaporization surface as a second plasma electrode and to form a plasma between the first and second plasma electrodes.

27. The vaporization device of claim 26 being configured as a component of a chemical vapor deposition reactor, the vapor-state-material output region being in gaseous communication with a reaction chamber of the chemical vapor deposition reactor.

28. The vapor forming device of claim 26 wherein the plasma generation circuitry is configured to hold the vaporization surface at ground potential and supply RF energy to the first plasma electrode to form the plasma.

29. The vapor forming device of claim 26 wherein the plasma generation circuitry is configured to supply RF energy to the vaporization surface and hold the first plasma electrode at ground potential to form the plasma.

30. The vapor forming device of claim 26 wherein the plasma generation circuitry is configured to provide a negative bias power to the vaporization surface and supply RF energy to the first plasma electrode to form the plasma.

31. The vapor forming device of claim 30 wherein the negative bias power is from about -1000 volts to about -20000 volts.